INTERNATIONAL JOURNAL OF LATEST TECHNOLOGY IN ENGINEERING, MANAGEMENT & APPLIED SCIENCE (IJLTEMAS)

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

The Moderating Role of Exchange Rate Volatility on Economic Factors and Financial Performance of Multinational Corporations in Nigeria

Ndidi Felix Efan and Dr. (Mrs) Josephine Ene

Baze University, Abuja

DOI : https://doi.org/10.51583/IJLTEMAS.2025.1402006

Received: 17 February 2025; Accepted: 22 February 2025; Published: 07 March 2025

Abstract: This study investigate the moderating role of exchange volatility on the relationship between economic factors and the financial performance of multinational corporations (MNCs) in Nigeria. The research adopted an ex-post facto research design, and the secondary data was collected from 2013 to 2022. The sample consisted of twenty chosen from the leading forty MNCs in Nigeria based on data availability, and multiple regression was used to establish the moderating effect of exchange rate volatility on these economic relations. The economic variables analyzed show that ROE is sensitive to the oil price, interest rate, and foreign reserves with an indication that an increased oil price and a low interest rate is an added advantage to its financial performance while low foreign reserves and high exchange rate volatility decrease ROE. Also, exchange rate volatility moderate the effect of these economic factors on ROE as evidenced in this study. Therefore, this study conclude that economic stability such as foreign reserves and exchange rates are relevant determinants of MNCs Financial performance in Nigeria. This study strongly recommends that MNCs adopt various risk management techniques, including currency management strategies, to address issues that threaten their stability. In this respect, the government needs to make efforts to strengthen the foreign reserves and control other economic variables favorable for MNCs. Further, the policies require MNCs in the oil-dependent industries to put in place strategies that may help contain variations in performance in line with the level changes in exchange rate volatility or other economic factors essential in maintaining performance in Nigeria's volatile economy.

I. Introduction

The rise of globalization has led multinational companies (MNCs) to extract their operations to emerging economies, capital investments, employment, and, more importantly, technology transfer. Such firms remain central to governments' quest to attract and nurture them, as well as MNCs' desire to make the greatest returns on capital employed through financial performance (FP). FP represents the efficient use of resources available by managing microeconomics and expenditure from outside environments (Mitra et al., 2023). Thus, macro-environmental variables such as oil prices, inflation levels, and interest rates affect MNCs financial performance (Nawaz et al., 2023).

Oil prices are doubly blessed with global supply-demand forces because of Nigeria's heavy dependence on oil for revenue and economic balance (Fischer, 2017; Umar, 2020). Inflation weakens purchasing power, raises operation and investment costs, and its manifestation is a sustained increase in prices (Mankiw 2014, Adenuga & Akpan 2017). The rates of interest cost of funds have a direct impression on MNCs capital structures and profitability (James-Chen, 2023; Mishkin, 2016). Fluctuations in exchange rates complicate the development of pricing strategies and decisions concerning foreign investments (Madura, 2015; Ali, 2021).

Since MNCs operate across different countries, it is imperative to understand how these external economic factors affect financial performance. Based on the above, this paper examines how fluctuations in oil price, inflation, and interest rate affect the financial performance of the MNCs firm in Nigeria and the measures it could take to achieve sustainable profitability in the face of economic reality.

Literature concerning firm performance as a central concept in both economic development and organizational outcomes is vast, but scholars are yet to reach a consensus as to its antecedents. Literature on firm-specific factors, including firm size, firm age, firm liquidity, and management policies (Iskandar & Alim, 2024; Airout et al., 2023), provides inconclusive information. For instance, Siregar et al. (2023) study found that capital structure has a negative relationship with performance. On the other hand, Vu Thi and Phung (2021) revealed the opposite. Among these disparities, some indicate that institutional and macroeconomic factors might be crucial, especially in unstable economies such as Nigeria, which is subjected to oil instabilities that induce steady fluctuations in the Nigerian economy (Okika et al., 2018).

Against this background, this paper examines how the exchange rate volatility influences the link between macroeconomic factors and MNC performance in Nigeria. Furthermore, the study aims to fill gaps in the existing literature and explore how these factors interact with each other and consequently hopes to present recommendations that would help to optimize future managerial approaches for MNCs, as well as public policies that can assist MNCs in dealing with uncertain environments. This study helps to fill the research gap in firm performance in the context of macroeconomic factors in developing countries.

The specific objectives are to:

i assess how economic factors affects the financial performance of multinational corporations in Nigeria.

ii investigate the effect of exchange rate vitality on financial performance of multinational corporations in Nigeria..

iii examine how exchange rate volatility moderate the effect of economic factors on the financial performance of multinational corporations in Nigeria.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

In keeping with the study's objectives, the following research questions are formulated in this study:

i In what ways do economic factors affects the financial performance of multinational companies operating in Nigeria?

ii How exchange rate vitality do affects financial performance of multinational corporations in Nigeria?

iii How do exchange rate volatility moderate the effect of economic factors on the financial performance of multinational corporations in Nigeria?

The following hypotheses of the study were formulated in line with the objectives of this study:

$H0_1$: Economic factors have no significant effects on the financial performance of multinational companies operating in Nigeria.

$H0_2$: There is no significant relationship between exchange rate vitality and the financial performance of multinational corporations in Nigeria.

$H0_3$: Exchange rate volatility has no significant moderate effect on the relationship between economic factors and the financial performance of multinational corporations in Nigeria.

II. Literature Review

Financial performance is a critical concept in financial and management literature, representing the overall health and efficiency of a company in generating profits and creating value for shareholders. Teece (2018) emphasizes that firm performance is driven by dynamic capabilities—sensing opportunities, seizing them, and transforming the organization accordingly. A limitation of this perspective is that it may not fully account for the broader market conditions and external factors that can influence firm performance beyond internal capabilities alone.

According to Blanchard and Johnson (2013), another definition of economics is a study of changes over time in various markets due to shifts in mass demand and supply; aspects like consumer behavior, government, and world economy. Though this perspective offers a good broad perspective, it might be overly broad and fail to focus on how certain economic parameters, such as inflation or exchange rates, actually impact certain such firms, particularly global giants in developing countries.

Oil price is defined in several ways by various scholars, reflecting different aspects and oil market benchmarks. The spot price of oil refers to the current market price at which oil can be bought or sold immediately, focusing on immediate market dynamics and transactions (Yan & Sexton, 2015). However, it may not fully reflect long-term supply and demand trends and can be volatile due to geopolitical events and market speculation. In addition, the spot price of oil refers to the current market price at which oil can be bought or sold immediately.

Foreign reserves, as defined by the IMF, consist of assets held by a country's monetary authorities, including foreign currencies and gold. They serve to maintain confidence in the country's currency, facilitate international transactions, and provide a buffer against external shocks such as balance of payments crises (IMF, 2017). This perspective emphasizes stability and international financial management. Similarly, according to Obstfeld (2015), from the viewpoint of central banks, foreign reserves are critical for managing exchange rate stability, intervening in foreign exchange markets to influence currency valuations, and ensuring liquidity to meet external obligations. Central banks use reserves to implement monetary policy and safeguard against currency volatility.

The inflation rate is commonly defined as the rate at which the average price level for goods and services within a given economy changes within a specified period, with the percentage change per annum being the most typical. To Mankiw (2014), the inflation rate is the percentage change in the average level of prices for goods and services during a specific period; it is typically evaluated once a year.

Interest rates are normally understood as the price a borrower pays or the income a lender receives, measured as a proportion of the nominal sum. According to Mishkin (2019), the interest rate is the sum that a lender charges a borrower for the use of assets; it is stated as a percentage of the principal. The expense of borrowing money is emphasized in this term. Bernanke (2013) similarly describes it as the overnight interest rate at which depository institutions exchange federal funds with one another.

Exchange rate variability is a measure of change in the foreign exchange rates within a stated period; for instance, it affects the global financial markets, economic stability, and behavioral patterns in trading and investing. IMF (2017) refers to exchange rate volatility as fluctuations in the exchange rate of a currency relative to another currency over a specified period. This definition focuses on the variability of currency values. Furthermore, as stated by Madura (2015), exchange rate volatility can be characterized as the degree of fluctuation in a currency pair's exchange rate over time, typically expressed as a standard deviation or variance, from the standpoint of financial markets. This point of view prioritizes statistical variability metrics.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

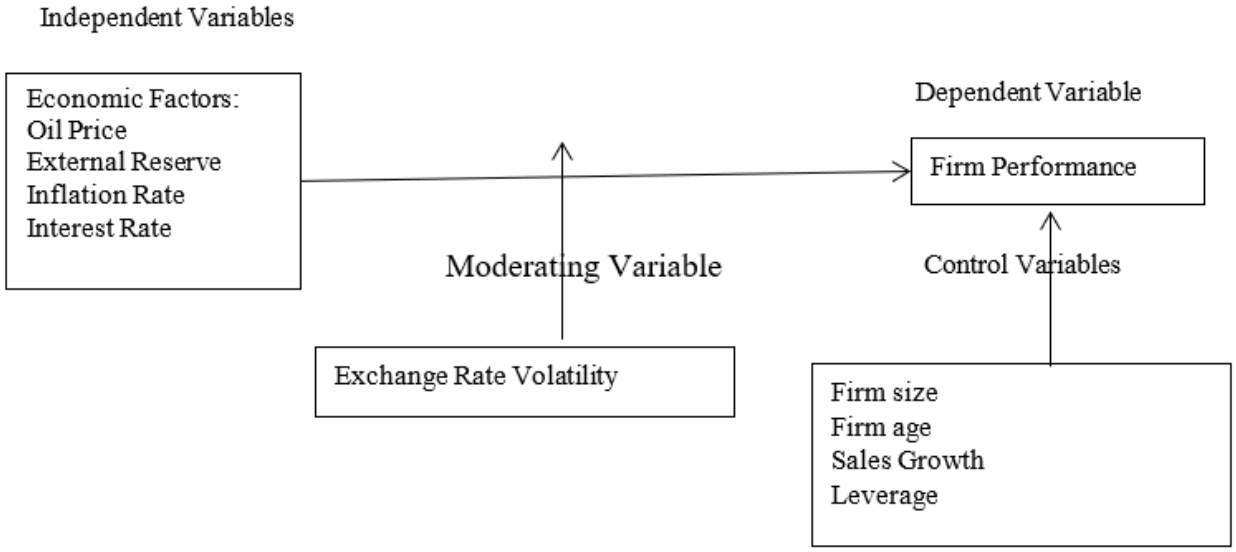

Fig 1: Conceptual Framework

Source: Field Survey, 2024

Emeni and Udo (2019) attempted to examine the impact of exchange rate volatility on the performance of firms in Nigeria with international operations. In a cross-sectional study employing regression analysis, they obtained data on exchange rate, inflation, and oil prices for the years 2010–2018 to analyze the impact of these factors on ROA. Research outcomes further confirmed that variations in exchange rates are inversely proportional to organization returns; therefore, tendencies in exchange rates lead to the enhancement of operational risk in MNCs. However, the study was done based on ROA only, and the other marker, such as ROE, was ignored, hence the study lacks depth. Also, it failed to examine the moderation effects of other sources of economic development. This current study builds upon these gaps by refining the examination of ROE, or return on equity, and adding interactions of the period of analysis between 2013 and 2022, specifically including the effects of inflation and interest rates on MNCs.

Okafor and Nwafor (2020) studied the effect of economic indicators such as oil prices, inflation rates, and interest rates that affect the profitability of the Nige downstream MNCs. Based on an analysis of the annual data from 2012 to 2019 with multiple regression analysis, the study established that the oil price positively affects MNC profitability, with mixed effects of inflation and interest rates on the profits. They found dependable economic antecedents that help to explain customer loyalty but overlooked exchange rate volatility as every possible moderator. The framework fails to consider how these exchange rate changes may affect such economic relations. This study helps to fill this gap by including exchange rate volatility as a moderator and investigating its influence on the effects of economic factors on MNC financial performance over time (2013-2022).

Khan and Ahmed (2020) researched the effect of oil price changes on firms' performance in several emerging economies, employing a panel data regression technique whereby they used data from 2005 to 2019. This gave them an indication that there is a positive impact of higher oil prices on the performance of energy firms but a negative impact on non-energy firms with remarkable dependence on fuel inputs. However, their study seemed to better identify emerging economies' factors without regard to specialized industries. This limitation suggests the need for more research work undertaken to explore the sectoral shocks within the single economy, which can give much deeper insights into how oil price fluctuations impact certain industries. Filling this gap, this current study evaluates the Nigerian economy to understand how oil prices impact MNCs and will embrace the sectoral approach to increase accuracy.

Iteh et al. (2022) looked into how, between 2004 and 2021, economic variables impacted the financial performance of multinational manufacturers in Nigeria. Data from 19 oil of the 22 listed global manufacturing organizations are examined in the study using an ex post facto research design and ordinary least squares regression. The findings show that volatility in oil prices hurts ROE, implying that changes in oil prices may cause manufacturing companies to become less profitable. However, the study was conducted in 2022 that may not capture the recent economic development in Nigeria. This research endeavors to bridge these disparities by examining the impact of economic variables on the operations of multinational corporations in Nigeria between 2013 and 2022, with a particular focus on the moderating role of exchange rate volatility. This research is more comprehensive and covers the latest economic events and their effects on many industries, offering relevant and up-to-date strategic insights.

Using Nigeria as a case study, Osei and Kiganda (2020) looked into the effect of foreign exchange reserves on the profitability of companies in Sub-Saharan Africa. Using a mixed-methods approach, the study combines qualitative interviews with quantitative analysis. Regression models are used to assess the quantitative data that covers 2000 to 2018. The study finds that foreign exchange reserves and business profitability are positively correlated. This is explained by the improved capacity to control foreign exchange risks and guarantee more seamless operations. The qualitative component's concentration is mainly on major enterprises, which limits its applicability and leaves out the experiences of smaller businesses. A wider range of firm sizes and industries are included in this study. To further

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

understand how exchange rate volatility affects the link between economic factors and company performance, it is also important to look at its moderating effect.

Eke and Ibe (2022) used Nigeria as a case study to investigate the connection between foreign reserves and the financial performance of businesses in emerging nations. Methodology: To evaluate the influence on firm performance indicators like ROA and ROE, the study uses a panel data analysis from 2005 to 2020. Fixed and random effects models are employed. According to the research, having sufficient foreign reserves protects a company from changes in exchange rates and maintains operational stability, which enhances business performance. The possible effects of world economic conditions, which can affect foreign reserves and company performance, are not considered. This study examines how exchange rate volatility effects on the link between foreign reserves and company performance to address this gap.

From 2000 to 2019, Babajide and Fakunle (2020) looked into how macroeconomic factors, such as inflation, affected the performance of listed consumer products companies in Nigeria. The study analyzes the effects of inflation on performance indicators like ROE and sales growth using panel data regression approaches, including fixed effects and random effects models. The results show that higher inflation rates result in lower ROE and slower sales growth, which negatively impacts firm performance. The study emphasizes how crucial stable macroeconomic circumstances are to the success of businesses. Although the study offers insightful information, it doesn't investigate how exchange rate volatility and inflation could interact to affect corporate performance. The moderating effect of currency rate volatility, which may be critical for businesses functioning in unstable economic contexts, is not incorporated. To address this, this study incorporate exchange rate volatility as a moderator.

Bello and Lawal (2022) investigated how interest rates affect business success in Nigeria's telecoms industry. Using a mixed-methods approach, the study analyzes financial data in addition to conducting company interviews and surveys with telecom companies. Regression analysis is used to investigate how interest rates affect investment choices and profitability. The results imply that fluctuations in interest rates have a major effect on the performance of telecom companies. Reduced infrastructure investment, higher borrowing costs, and decreased profitability are all caused by higher interest rates. While the mixed-methods approach provides comprehensive insights, the study's focus on the telecommunications sector may limit its generalizability to other industries. This study fills this gap by examining MNCs in various sectors and incorporating exchange rate volatility as a moderating factor.

Investigating the impact of exchange rate fluctuations, inflation, and foreign reserves on ROE for MNCs, Nguyen and Tran (2021). Employing both qualitative and quantitative data from the years 2010 to 2019, they realized that higher inflation and exchange rate volatility decreased the ROE, but our attained foreign reserves made the profitability more buffered. Concerns about the exchange rate were voiced by the financial managers through qualitative data collected, which are valid in conditions of inflation. However, there was no assessment of how moderation of the exchange rate has an impact on other economic factors. This study fills these gaps by incorporating exchange rate volatility as a moderator into the established model of the relationship between inflation and ROE in the Nigerian environment.

Transaction Cost Theory (TCT), also known as the Transaction Cost Approach, Williamson (1975, 1985), is used to anchor this study since it provides the framework within which MNCs and other firms act in managing economic factors within hierarchies and markets. When applied to the Nigerian setting concerning MNCs, the essential variables include and are best described as transactional hazards that affect the performance of firms in the context of the specified factors: exchange rate risk, oil prices, inflation, interest rates, and foreign reserves.

III. Research Methodology

The ex-post facto research design is most appropriate for use in this study because it enables the researcher to study the extent to which microeconomic influence impacts the performance of MNCs in Nigeria while the independent variables are not manipulated. Secondary data for the period 2013-2022 increases the reliability of the study as it gives a large coverage for analysis of variance regarding exchange rate volatility. In choosing 20 purposefully out of the population of the Top 40 MNCs in Nigeria based on their market values and employ job satisfaction (Nigerian Finder, 2018. Data for this study were gathered from the firms audited annual reports, which provided detailed information on firm financial performance metrics such as Return on Assets (ROA) and Return on Equity (ROE), and also the control variables introduce that of comprising firm age, sales growth, leverage, and firm age, while ifr rate, oil price, interest rate, foreign reserve, and exchange rate volatility were obtained from National Bureau of Statistics 2023.

The model is described as follows:

Model 1

$$ROE_{it}=\beta_0+\beta_1 OP_t+\beta_2 FR_t+\beta_3 Inf_t+\beta_4 IR_t+\beta_5 ERV_t+\beta_6 FAGE_{it}+\beta_7 RGT_{it}+\beta_5 DE_{it}+\beta_8 FS_{it}+\epsilon it$$

Model 2

$$ROEit=\beta_0+\beta_0+\beta_1 OP_t+\beta_2 FR_t+\beta_3 Inf_t+\beta_4 IR_t+\beta_5 ERV_{it}+\beta_6 FAGE_{it}+\beta_7 RGT_{it}+\beta_8 DE_{it}+\beta_9 FS_{it}+\beta_{10}(OP_t\times ER)+\beta_{11}(FR_t\times ER)+\beta_{12}(Inf_t\times ER)+\beta_{13}(IR_t\times ER)+\epsilon it$$

Where: ROE_{it} = Firm performance of firm i at time t, OP_t = Oil price at time t, FR_t = Foreign reserves at time t, Inf_t = Inflation rate at time t, IRt = interest rate at time t, ERV_t = Exchange rate volatility at time t, $FAGE_{it}$ = Firm age of firm i at time t, FSit=Firm size i at time t,

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

RGT_{it} = Sales growth of firm i at time t, DE_{it} = Leverage of firm i at time t, The interaction terms (e.g., $FR_{it} \times ER_{it}$) represent the moderating effect of exchange rate volatility, ϵ_{it} = error term, $\beta_1 - \beta_{13=}$ Coefficients of their respective variables, $B_{0\,=}$ constant

IV. Results and Discussion

This chapter presents the data output and discussion that includes descriptive statistics, correlation matrix, regression results, hypotheses testing, and the discussion of the findings.

Table 4. 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	200	0.318	0.486	-0.29	3.42
IFR	200	13.031	3.662	8.05	18.85
OP	200	2.624	0.141	2.42	2.83
IR	200	12.875	0.848	11.5	14.00
FR	200	7.563	0.074	7.42	7.66
FS	200	24.859	1.131	2.39	2.80
ERV	2000	2.67	.145	2.2	2.63
FAGE	200	54.15	14.212	21	99.00
RGT	200	0.038	0.196	-0..5	1.03
DE	200	1.077	1.99	0.00	10.91

Source: STATA Output, 2024

Table 4.1 shows that return on equity (ROE (has a mean of 0.318 and a standard deviation of 0.486, implies a moderate variation, it range from -0.29 to 3.42. Inflation Rate (IFR) averages 13.031 (SD: 3.664), which ranged from 8.05 to 18.85, implies a wide variation. Oil Price (OP) also includes relatively small variation in their mean value of 2.624 and standard deviation of 0.141, with the observed values ranging between 2.42 and 2.83. Interest Rate (IR) averages 12.875 (SD: 0.848, though ranging from 11.5 to 14 in inches), implies a moderate veriation. Foreign Reserves (FR) remain stable, averaging 7.563 (SD: 0.074). Exchange Rate Volatility (ERV) is low, with a mean of 2.67 (SD: 0.145).

Table 4. 2: Correlations Martix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) roe	1.000									
(2) ifr	-0.106	1.000								
	(0.137)									
(3) op	0.083	-0.210*	1.000							
	(0.244)	(0.003)								
(4) ir	-0.107	0.291*	-0.117	1.000						
	(0.130)	(0.000)	(0.100)							
(5) fr	-0.010	-0.296*	0.657*	0.067	1.000					
	(0.888)	(0.000)	(0.000)	(0.345)						
(6) erv	-0.166*	0.706*	-0.355*	0.372*	-0.039	1.000				
	(0.019)	(0.000)	(0.000)	(0.000)	(0.584)					
(7) rgt	0.089	0.373*	0.273*	0.123	0.127	0.222*	1.000			
	(0.209)	(0.000)	(0.000)	(0.082)	(0.072)	(0.002)				
(8) de	0.108	0.043	-0.015	0.017	-0.014	0.041	-0.044	1.000		

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

	(0.126)	(0.546)	(0.838)	(0.811)	(0.849)	(0.560)	(0.539)			
(9) fage	0.267*	0.154*	-0.028	0.045	0.024	0.180*	0.084	-0.086	1.000	
	(0.000)	(0.030)	(0.693)	(0.523)	(0.733)	(0.011)	(0.236)	(0.226)		
(10) fs	-0.085	0.007	-0.008	0.003	0.028	0.043	0.115	0.003	0.155*	1.000
	(0.229)	(0.927)	(0.910)	(0.970)	(0.693)	(0.550)	(0.105)	(0.967)	(0.028)	
*** p<0.01, ** p<0.05, * p<0.1										

Variance inflation factor

	VIF	1/VIF
erv	3.484	.287
ifr	3.31	.302
op	3.086	.324
fr	2.961	.338
rgt	1.405	.712
ir	1.196	.836
fage	1.073	.932
fs	1.045	.957
de	1.017	.984
Mean VIF	2.064	.

Source: STATA Output, 2024

Table 4.2 indicates that the dependent variable, return on equity (roe) exhibits weak association with the independent variables, none of which are statistically significant: oil price (op) (0.083), interest rate (IR) (-0.107), foreign reserve (FR) (-0.010), and inflation rate (IFR) (-0.106). The independent variables themselves show significant but weak correlations, such as between inflation rate and oil price (-0.210, p=0.003), interest rate (0.291, p=0.000), and foreign reserve (-0.296, p=0.000), indicating absence of strong association among independent variables, and with VIF mean of 2.064, implies that there is no issue of multicollinearity.

Table 4. 3: Model I Linear regression, Correlated panels corrected standard errors (PCSEs)

roe	Coef.		t-value	p-value
IFR	-0.068		-2.30	0.022**
OP	0.027		0.15	0.880
IR	-0.025		-1.49	0.136
FR	-0.530		-1.75	0.081
ENV	-0.603		-3.17	0.002***
Fage	0.011		3.00	0.003***
RGT	0.45		2.43	0.015***
DE	0.039		1.62	0.000***
FS	-0.052		-2.15	0.031**
CONSTANT	7.006		3.57	0.000***
Hettest				0.000***
Hausman specification test				0.006***
R-squared	0.1839		Number of obs	200
Wald Chi2	85.87		Prob > F	0.000***

Source: STATA Output, 2024

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

Table 4.3 shows a Hettest are 0.000, suggesting the presence of heteroskedasticity in the framework since the p-value < 0.05. Regression robustness addresses this. Also, the Hausman specification test is 0.006 with a p-value < 0.05, confirming that the fixed effects model is more suitable for the panel data compared to the Random Effects Model. However, the method that is most appropriate for panel data is the Linear Regression with panels corrected standard errors *(*PCSEs) because it corrects the standard error for heteroscedasticity, serial correlation, and cross-sectional dependencies and hence allows for more accurate inference.

Table 4.3 also shows the results from linear regression with PCSEs that correct for the fact that the models include correlated panels. Therefore, the model explains 18.39% of all the variations in ROE, and obtained Wald Chi2 of 85.87 is greater than the tabulated Chi2 at Prob>F of 0.000. A significant inverse relationship exists between IFR and ROE (-0.068, p < 0.05) to show that cost pressures push down profitability. Exchange rate volatility (ENV) is also robust and negative (-0.603, p = 0.002), suggesting that firms with higher levels of ENV are likely to have lower ROE because fluctuations in exchange affect performance in multicurrency operations. In the case of other independent variables, this study found that the oil price (OP), foreign reserve (FR) and interest rate (IR) are non-significant.

Table 4. 4: Model 2 Linear regression, Correlated panels corrected standard errors (PCSEs)

ROE	Coef.		t-value	p-value
IFR	-1.225		-5.98	0.000***
OP	28.313		6.79	0.000***
IR	0.338		2.00	0.045**
FR	-91.459		-5.59	0.000***
ER	-23.849		-5.36	0.000***
IFR_ER	0.465		5.97	0.000***
OP_ER	-10.839		-6.58	0.000***
IR_ER	-0.111		-1.78	0.076***
FR_ER	34.516		5.53	0.000***
FAGE	0.012		2.96	0.003***
RGT	0.526		2.66	0.008***
DE	0.039		3.60	0.000***
FS	-0.054		-1.23	0.026**
Constant	9.861		5.41	0.000***
Hettest				0.000**
Hausman Specification Test				0.006**
R-squared	0.2086	Number of obs	200	
F-Test	777.96	Prob > F		0.000***
*** p<.01, ** p<.05, * p<.1				

Source: STATA Output, 2024

Also, Table 4.3 shows Hettest (p-value=0.000) provides evidence of heteroskedasticity meaning that the variance of errors is not constant across the observations. To address this, regression robustness is employed. Moreover, using the Hausman specification test for model specification show a p-value of 0.006 which shows that using a fixed effects model is more appropriate than a random effects model in the context of this data. However, the method that is most appropriate for panel data is the Linear Regression with PCSEs because it corrects the standard error for heteroscedasticity, serial correlation, and cross-sectional dependencies and hence allows for more accurate inference.

The results from Model 2 analysis using PCSE regression are shown in Table 4.4. The model established an R-squared of 0.1917, which indicated that the model accounted for 19.17% of the variation in the ROE. The model proves to be relevant with a Wald Chi2 of 170.19, which is significant as 1%, proving that the model has a nice fit.

$H0_1$: The empirical results indicate that OP has a positive impact on ROE (28.313, p < 0.05), while IR has a slight positive sign (0.338, p = 0.05), and FR has negative effects (-91.459, p < 0.000) on the ROE. H01 is rejected.

H02: Fluctuations in exchange rates (FERR) lead to a negative relation with ROE (-23.84, p < 0.000). H02 is rejected.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

H03: Relative to the analysis made in the previous sections, exchange rate fluctuations are estimated to have first-order moderating effects on the relationship between the economic factors and ROE. Out of these interaction terms, IFR_ERV, OP_ERV, and FR_ERV have a significant effect on ROE. H03 is thus rejected, thus supporting transactional theory as well as prior research.

When used directly each of this study economic factors, the result also reveals that oil price (OP) has a significant positive effect on ROE with a coefficient estimate of 28.313 ($p < 0.05$). Interest rate (IR) also expresses a positive relationship with ROE with a coefficient of 0.338 and a p-value of.05. FR has a negative significant relationship with ROE with coefficients of -91.459 and statistically significant at the 0.000 level. Based on this, this study rejects this first economic factor hypothesis that assumes that economic factors have no significant effect on financial performance of multinational corporations in Nigeria. This support the transactional theory of Williamson (1975, 1985), and Okafor and Nwofor (2020) studies.

The coefficient of exchange rate volatility (ERV) is -23.84 with 'p' value of less than 0.000 when used directly, indicating that generally, high exchange rate can raise firms' production costs or impose broader systemic pressure that reduces their return on equity. This study also rejects this hypothesis that there is no significant relationship between exchange rate volatility and the financial performance of multinational corporations in Nigeria. This support the transactional theory of Williamson (1975, 1985), the study of Adewale and Musa (2020) and that of Okeke and Nwosu (2021).

The subsequent findings come from the interaction terms. Firms with higher IFR_ERV have a relatively less negative relationship between INF and ROE, where the coefficient is 0.465 (p-value = 0.000). OP_ER also comes out negative (-10.839, p-value = 0.000), which means that high exchange rate volatility has a dampening effect on the relationship between oil prices and ROE due to unpredictable international oil business. Likewise, FR_ER results in a coefficient of 34.516 and a p-value of 0.000, indicating that exchange rate volatility increases the positive influence of foreign reserves on ROE and that foreign reserves provide stability during fluctuation in currency. Based on this interaction analysis, this study also rejects the assumption that exchange rate volatility has no significant moderate effect on the relationship between economic factors and the financial performance of multinational corporations in Nigeria. Transactional theory of Williamson (1975, 1985), and the study Chamberlin and Rouf (2019), and Olawale and Akinbami (2020).

V. Conclusion and Recommendations

Conclusion

The study concludes that there is a statistically significant positive relationship between economic factors and exchange rates and MNCs' performance in Nigeria. A high oil price and interest rate increase financial performance in terms of return on equity (ROE), while a low foreign reserve and high exchange rate are the main factors that exert negative pressure on the financial performance of the banks. Concerning factors such as inflation and oil prices, exchange rate volatility plays an important role, showing that a stable economic environment is necessary for MNCs to keep up healthy financial performance.

Recommendations

i The countries' macroeconomic environment must be stable to moderate inflation, influence interest rates, and accumulate foreign exchange reserves. Coordination in these economic factors will lead to stability of the economic factors, which will create a better environment for the operation of the MNCs and thus improve their financial performance.

ii Multinationals operating in the Nigerian environment should design suitable risk management strategies targeted at the exchange rate volatility. The position may also oscillate with cost fluctuations related to multinational operations, so currency hedging, forward, and similar tools may minimize these factors' effects.

iii It is evidenced that exchange rate volatility influences direct financial performance as well as modifies the consequences of other economic factors such as inflation, oil prices, and foreign reserves on ROE. Due to these elaborate interacting effects, MNCs should implement more elastic strategies for their businesses. Such positions as liquidity accumulation, distribution of firms' operational facilities, or shifting of the investment profile away from an unpredictable economic factor can be applied.

References

1. Adenuga, A. O., & Akpan, U. F. (2017). Inflation and exchange rate volatility in Nigeria: An empirical investigation. Journal of Business and Economic Policy, 4(3), 104-118.
2. Adewale, A., & Musa, S. (2020). Impact of exchange rate fluctuations on the financial performance of multinational firms in sub-Saharan Africa. Journal of International Finance, 32(2), 75–90.
3. Andriyani, K., Marwa, T., Adnan, N., & Muizzuddin, M. (2020). The determinants of foreign exchange reserves: Evidence from Indonesia. The Journal of Asian Finance, Economics and Business, 7(11), 629-636. https://doi.org/10.13106/jafeb.2020.vol7.no11.629
4. Babajide, O., & Fakunle, F. (2020). Impact of macroeconomic variables on the performance of listed consumer goods firms in Nigeria. African Journal of Business Management, 14(3), 75-85.
5. Bello, R. O., & Lawal, A. M. (2022). Impact of interest rates on firm performance: Evidence from the telecommunications sector in Nigeria. Telecommunications Research Journal, 8(1), 89-104.
6. Blanchard, O., & Johnson, D. R. (2013). Macroeconomics (6th ed.). Pearson.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue II, February 2025

7. Chamberlin, R., & Roux, J. (2019). The impact of exchange rate volatility and macroeconomic factors on multinational corporations in South Africa. Journal of Economic Studies, 46(2), 194-210.
8. Eke, C. O., & Ibe, R. C. (2022). Foreign reserves and financial performance of firms in emerging markets. International Journal of Financial Studies, 10(1), 55-74.
9. Emeni, K., & Udo, M. (2019). The impact of exchange rate volatility on the financial performance of multinational corporations in Nigeria. Journal of Emerging Market Studies, 13(4), 321-340.
10. Fischer, S. (2017). Macroeconomics. W.W. Norton & Company.
11. IMF (2017). International Reserves: IMF Policy Paper. International Monetary Fund.
12. Iskandar, D., & Alim, M. (2024). The effect of profitability, liquidity and leverage ratios on internet financial reporting and company size as moderating variables during the COVID 19 pandemic (An empirical study on the BEI various industries sub-sector). Journal of Economics, Finance and Management Studies, 7(01).
13. Iteh, A. A., Idaka, S. E., & Goodwill, G. F. (2022). Effect of economic indices on the performance of listed multinational manufacturing companies in Nigeria. International Journal of Science and Research Archive, 7(2), 115-127.
14. James-Chen, T. (2023). Interest rate. Barron's Educational Series.
15. Khan, M., & Ahmed, R. (2020). Relationship between oil prices and firm performance in emerging economies. Journal of Emerging Markets, 15(3), 233-248.
16. Madura, J. (2015). International financial management (12th ed.). Cengage Learning.
17. Mankiw, N. G. (2014). Principles of Economics (7th ed.). Cengage Learning.
18. Mishkin, F. S. (2016). The economics of money, banking, and financial markets (11th ed.). Pearson.
19. Mishkin, F. S. (2019). The Economics of money, banking, and financial markets (12th ed.). Pearson.
20. Mitra, D., Gaur, A., & Singh, D. (2023). Determinants of firm performance: Evidence from emerging markets. Journal of International Business Studies, 54(2), 345-367.
21. Nawaz, T., Afshan, G., & Azam, M. (2023). External environmental factors and their impact on firm performance: Evidence from South Asian economies. Management Research Review, 46(3), 231-251.
22. Nguyen, T., & Tran, H. (2021). Exchange rate fluctuations, inflation, and foreign reserves on the performance of multinational corporations in Vietnam. Emerging Markets Review, 32, 102-112.
23. Nigerian Finder (2018). 40 Top multinational companies. https://nigerianfinder.com/top-50-companies-in-nigeria
24. Obstfeld, M. (2015). International finance and growth in developing countries: What have we learned? Globalization and poverty. University of Chicago Press.
25. Okafor, E., & Nwafor, A. (2020). Influence of macroeconomic factors on the profitability of Nigerian multinational corporations: Inflation and interest rate analysis. Nigerian Journal of Economic Analysis, 16(5), 87-104.
26. Okeke, U., & Nwosu, B. (2021). Exchange rate volatility and financial stability in the Nigerian banking sector. African Economic Journal, 28(1), 45–62.
27. Okika, E., Udeh, D. F., & Okoye, G. O. (2018). Effect of exchange rate fluctuation on firm profitability: Evidence from selected quoted conglomerates in Nigeria. Available at SSRN 3461137.
28. Olawale, M., & Akinbami, L. (2020). Economic factors and the financial performance of multinational corporations in Nigeria: An empirical analysis. Nigerian Journal of Economics and Finance, 15(3), 125-140.
29. Osei, R. D., & Kiganda, E. O. (2020). Impact of foreign exchange reserves on corporate profitability in Sub-Saharan Africa. Sub-Saharan African Business Review, 16(4), 90-108.
30. Palepu, K. G., & Healy, P. M. (2013). Business analysis and valuation: Using financial statements (5th ed.). Cengage Learning.
31. Rodrik, D. (2015). Economics of development. Handbook of Economic Growth, 2, 2015-2024.
32. Ross, S. A., Westerfield, R. W., & Jaffe, J. (2013). Corporate finance (10th ed.). McGraw-Hill/Irwin.
33. Siregar, S. D., Toni, N., & Ariesa, Y. (2023). Impact of dividend policy, capital structure, and profitability on consumer goods firm value: Role of firm size (2013-2022). Journal of Economics and Business Letters, 3(4), 38-48.
34. Teece, D. J. (2018). Dynamic capabilities as (workable) management systems theory. Journal of Management & Organization, 24(3), 359-368.
35. Umar, G. (2020). The dynamics of oil prices and Nigeria's economy. African Development Review, 32(1), 101-116.
36. Vu Thi, A. H., & Phung, T. D. (2021). Capital structure, working capital, and governance quality affect the financial performance of small and medium enterprises in Taiwan. Journal of Risk and Financial Management, 14(8), 381.
37. Williamson, O. E. (1975). Markets and hierarchies: Analysis and antitrust implications. Free Press.
38. Williamson, O. E. (1985). The economic institutions of capitalism: Firms, markets, relational contracting. Free Press.
39. Yan, L., & Sexton, S. E. (2015). Hedging pressure and futures price movements in oil futures. Journal of Futures Markets, 35(11), 1070-1084.